

ACC NR: AP6021448

(A)

SOURCE CODE: UR/0413/66/000/011/0073/0073

INVENTORS: Korshak, V. V.; Vinogradova, S. V.; Siling, S. A.

ORG: none

TITLE: A method for obtaining heat-resisting polyarylates. Class 39, No. 182329

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 11, 1966, 73

TOPIC TAGS: polyaryl plastic, dicarboxylic acid, formaldehydo, thermoplastic material, polymor, plastic, phenol

ABSTRACT: This Author Certificate presents a method for obtaining heat-resisting polyarylates by treating linear saturated thermoplastic polyarylates (based on bis-phenols and dicarboxylic acids) with novolak or formaldehydo. To expand the assortment of heat-resisting materials, polyarylates based on phenolphthalein and dicarboxylic acids are used as linear saturated thermoplastic polyarylates.

SUB CODE: 11/
07/ SUBM DATE: 2/May63

UDC: 678.673.073-9:547.281.1

Card 1/1

ACC NR: AP6029050

(A)

SOURCE CODE: UR/0413/66/000/014/0000/0000

INVENTORS: Korshak, V. V.; Vinogradova, S. V.; Salazkin, S. N.

ORG: none

TITLE: A method for obtaining polyarylates. Class 39, No. 183935 [announced by
Institute of Organo-elemental Compounds AN SSSR (Institut' elementoorganicheskikh
soyedineniy AN SSSR)]

SOURCE: Izobret prom obraz tsv zn, no. 14, 1966, 80

TOPIC TAGS: polyaryl ~~phenyl~~ ^{dicarboxylic acid, phenol}ABSTRACT: This Author Certificate presents a method for obtaining polyarylates based
upon chloranhydrides of dicarboxylic acids and bis-phenols.. To impart noncombusti-
bility to the polyarylates, 2- β -chlorethyl-3,3-bis(4-hydroxyphenyl) phthalimidine
is used as bis-phenol.

SUB CODE: 11/

SUBM DATE: 29May65

UDC: 678.673'52'52

Card 1/1

L 21421-66 EWT(m)/EWP(j)/T/ETC(m)-6 MM/RM
ACC NR: AP6009796

SOURCE CODE: UR/0062/66/000/002/0308/0314
35
34
B

AUTHOR: Vinogradova, S. V.; Salazkin, S. N.; Korshak, V. V.

ORG: Institute of Heteroorganic Compounds, Academy of Sciences SSSR (Institut
elementoorganicheskikh soyedineniy Akademii nauk SSSR)

TITLE: Heterochain polyesters. 62. Polyarylates from bisphenyldicarboxylic acids

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 2, 1966, 308-314

TOPIC TAGS: aromatic polyester, polyarylate, bisphenyl dicarboxylic acid, dihydric
phenol, heat resistant polymer, polymer solubility, polymer film

ABSTRACT: The combination of high heat resistance and good mechanical properties
with solubility in organic solvents was the purpose of this study of polyarylates
(PA), synthesized from a dihydric phenol and a bicyclic dicarboxylic aromatic acid.
4,4'-(I) or 2,2'-bisphenyldicarboxylic (II) or combinations of (I) and (II)
acids were used as the bicyclic acid component, and bisphenol-A, phenolphthalein,
phenolphthalein anilide, "phenoldiphenine" [2,2'-bis-(4-hydroxybenzoyl)bisphenyl]
or xylenolphthalein were used as the phenolic component. Nonmixed and mixed PA were
synthesized by equilibrium condensation in a nitrogen stream, in "Sovol" solution
(Sovol-chlorinated bisphenyl). Only the acid components, i.e., (I), (II), or terephthalic
acid, were used to prepare mixed PA. It was found that PA from (I) have a higher
softening temperature as compared with analogous polyterephthalates and are still

UDC: 541.6+542.91

Card 1/2

L 21421-66

ACC NR: AP6009796

soluble in organic solvents (exception: PA from bisphenol-A). This solubility makes it possible to use these PA for manufacturing films, fibers, and lacquer coatings.¹³ The dependence of the physical properties on the structure and composition of the PA obtained is discussed. Among other points it was noted that loose packing of polymer chains in phthaloyl or phthaloyl anilide derivatives is caused by the size of these side groups and the effect of the ortho-substitution in (II), which sharply decreases the softening temperature. Both nonmixed and mixed PA containing (I) can form mechanically strong films from solutions; such films retain their good mechanical properties at 290°C. Orig. art. has: 1 figure and 5 tables. [BN]

SUB CODE: 07, 11/ SUBM DATE: 19Sep63/ ORIG REF: 010/ OTH REF: 010/ ATD PRESS
4221

Cont 2/2 JVF

VINOGRADOVA, S.V.; KORSHAK, V.V.; KORCHEVEY, M.G.

Copolymerization of allyl side chain containing unsaturated poly-
arylates with styrene. Vysokom. soed. 7 no.11:1884- 888 N '65.

Copolymerization of allyl side chain-containing unsaturated poly-
arylates with methyl methacrylate. Ibid.:1889-1893
(MIRA 19:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Submitted
December 7, 1964.

KORSHAK, V.V.; RAFIKOV, S.R.; VINOGRADOVA, S.V.; FOMINA, Z.Ya.

Photochemical degradation of polyarylates in solution. Vyeokom.
soed. 7 no.11:1908-1912 N '65. (MIRA 19:1)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. Submitted
December 9, 1964.

VINOGRADOVA, S.V.; KORSHAK, V.V.; FRIDMAN, Ye.I.; ANDROSEVA, M.A.;
BRAUDSKINA, L.N.

Heat resistant electric insulation plastics on a polyarylate
base. Plast. massy. no.9:16-19 '65. (MIRA 18:9)

VINOGRADOVA, S.V.; ANDREYEVA, M.A.; DAVYDOVA, V.F.; KORSHAK, V.V.

Studying the possibilities of the hardening and processing in goods
of thermosetting polyarylates. Plast. massy no.10:1-3 '65.
(MIRA 18:10)

A	L 10190-66 ENT(m)/EWP(j)/T	WW/RM	
ACC NR:	AP5026490	SOURCE CODE:	UR/0286/65/000/020/0066/0066
INVENTOR:	Korshak, V. V.; Vinogradova, S. V.; Fomina, Z. Ya.	44,55 44,55 44,55	34 B
ORG:	none		
TITLE:	Preparative method for polyaryl esters.	Class 39, No. 175656	15
SOURCE:	Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 66		
TOPIC TAGS:	polyester plastic, heat resistant plastic, thermosetting material, ester, polyaryl plastic		
ABSTRACT:	An Author Certificate has been issued for a preparative method for poly-aryl esters from dihydric phenols and aromatic dicarboxylic acid chlorides. To impart thermosetting properties to the polyesters, trihydric phenols, such as phloroglucinol, are added to the reaction mixture. [SM]		
SUB CODE:	0711/	SUBM DATE:	29May64/ ATD PRESS: 4158
Card	112	UDC:	678.673

KORSHAK, V.V.; VINOGRADOVA, S.V.; ANTONOVA-ANTIPPOVA, I.P.

Colored polyarylates based on some dihydroxyanthraquinones.
Vysokom. soed. 7 no.9:1543-1548 S '65. (MIRA 18:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

L 2925-66 ENT(m)/EPF(c)/EWP(j)/T/ETC(m) NH/RM

UR/0190/65/007/009/1514/1618
678.01:54+678.674

ACCESSION NR: AP5022610

AUTHORS: Rode, V. V.; Zhuravleva, I. V.; Rafikov, S. R.; Korshak, V. V.;
Vinogradova, S. V.; Pankratov, V. A.

TITLE: The high temperature degradation of polydihydroxydiphenylfluorene-phthalate. 24th communication in the series "Chemical Transformation of Polymers"

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1614-1618

TOPIC TAGS: thermal degradation, thermal oxidation, organic compound, polymer/D 9 polyarylate

ABSTRACT: The thermal degradation and thermooxidation of polyarylate D-9 was investigated. This investigation is an extension of the previously published work of I. V. Zhuravleva, V. V. Rode, and S. R. Rafikov (Izv. AN SSSR, ser. khim., 1965, 269). The thermal degradation and thermooxidation were carried out over the temperature region from 325 to 500°C by 25°C intervals. Graphs for the kinetics of gas evolution during degradation and thermooxidation are presented. The composition of the thermooxidation-degradation products are tabulated. The

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L 2925-66

ACCESSION NR: AP5022610

experimental results obtained for the thermooxidation in air are shown graphically in Fig. 1 on the Enclosure. It is concluded that the thermooxidation degradation of polyarylate D-91 proceeds via a homolytic chain rupture accompanied by the evolution of CO₂, CO, and H₂ gases. No induction period for the thermooxidation was observed. Orig. art. has: 2 tables and 6 graphs.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute for Heteroorganic Compounds, AN SSSR) ¹⁴⁵⁵

SUBMITTED: 23Oct64

ENCL: 01

SUB CODE: OC

NO REF SOV: 003

OTHER: 000

Card 2/32

KORSHAK, V.V.; VINOGRADOVA, S.V.; BASKAKOV, A.N.; VALETSKIY, P.M.

Synthesis of polyarylates based on 2,2-di-(4-hydroxy-3-methylphenyl) propane. Vysokom. soed. 7 no.9:1633-1636 S '65.

(MIRA 18:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KORSHAK, V.V.; PAVLOVA, S.A.; TIMOFEYeva, G.I.; VINOGRADOVA, S.V.;
PANKRATOV, V.A.

Effect of the method of preparation and of the size of the
side chain radical on the viscosometric properties of
polyarylates. Vysokom. soed. 7 no.10:1679-1683 O '65.
(MIRA 18:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KURSHAK, V.V.; VINOGRADOVA, S.V.; PANKRATOV, V.A.

Synthesis and study of polyarylates based on 4,4'-dirhenyldi-carboxylic acid and bisphenols with various substituents at the central carbon atom. Vysokom. soed. 7 no.10:1689-1692 0 '65. (MIRA 18:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

KORSHAK, V.V.; MANUCHAROVA, I.F.; VINOGRADOVA, S.V.; PANKRATOV, V.A.

Investigation of the thermal stability of a number of poly-
arylates by differential thermal analysis. Vysokom. soed. 7
no.10:1813-1817 O '65. (MIRA 18:11)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i
Institut obshchey i neorganicheskoy khimii AN SSSR.

(A) L 13518-66 EWT(m)/EWP(j)/T RM

ACC NR: AP6001859

SOURCE CODE: UR/0190/65/007/012/2048/2051

26
B

AUTHORS: Vinogradova, S. V.; Korshak, V. V.; Korzeneva, Yu. I.

ORG: Institute of Elemento-organic Compounds, AN SSSR (Institut elementoorganicheskikh soyedineniy, AN SSSR)

TITLE: Kinetics of polycondensation of 4,4'-(β , β' -dihydroxyethoxyphenyl)-2,2-propane [Abstracter's note: word "phenyl" is added to correct the error in the original title] and 4,4'-(β , β' -dihydroxypropoxyphenyl)-2,2-propane with fumaric acid. 79th report in the series On Heteropolyesters

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2048-2051

TOPIC TAGS: polycondensation, fumaric acid, polymerization kinetics, adhesive, polyester plastic

ABSTRACT: Kinetics of polycondensation of 4,4'-(β , β' -dihydroxyethoxyphenyl)-2,2-propane (I) and 4,4'-(β , β' -dihydroxypropoxyphenyl)-2,2-propane (II) with fumaric acid (III) at 190--220°C was investigated. The reaction is of interest as it leads to formation of adhesives of high thermal resistivity and of high mechanical and insulatory properties which are required in the preparation of reinforced glass. This reaction was conducted with equimolar amounts of reagents in a molten state, in a stream of oxygen-free nitrogen. The progress was followed by determining oxygen number of the reaction mixture at various time intervals according to the method

Card 1/2

UDC: 541.64+678.574

Z

L 13518-66

ACC NR: AP6001859

described by T. N. Kasterina and L. S. Kalinina (Khimicheskiye metody issledovaniya sinteticheskikh smol i plasticheskikh mass, Goskhimizdat, M., 1963, str. 178). The data obtained at various temperatures are summarized in Fig. 1, a and b. It was

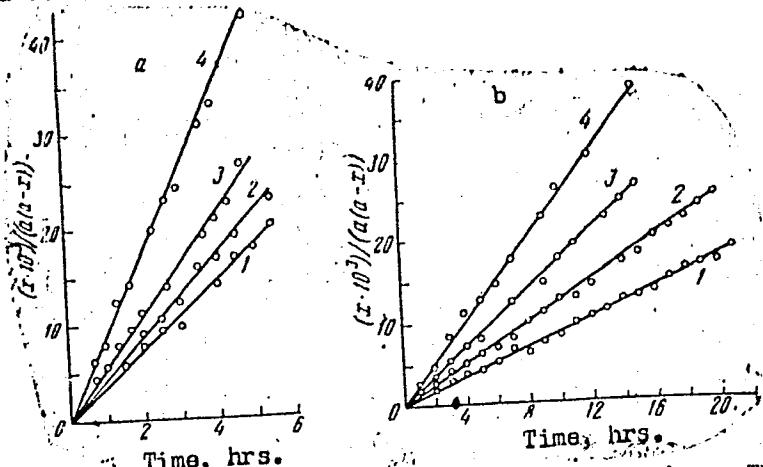


Fig. 1. Polycondensation of fumaric acid: a - with I; b - with II.
1 - 190°C, 2 - 200°C,
3 - 210°C, 4 - 220°C.

established that the reaction is of the second order. The rate constants for various temperatures between 190--220°C were calculated and so were the activation energies, which were 13200 cal/mol for reaction of I with III and 16500 cal/mol for reaction of II with III. Orig. art. has: 3 tables and 3 figures.

SUB CODE: 07
Card 2/2 DK

SUBM DATE: 07Dec64/

ORIG REF: 003

ACC NR: AP6001860

(A) L 13519-66 ENT(m)/ENP(j)/T/EWA(c)/ETC(m) WH/RM

SOURCE CODE: UR/0190/65/007/012/2052/2056

AUTHORS: Vinogradova, S. V.; Korshak, V. V.; Antonova-Antipova, I. P.

54
B

ORG: Institute of Elemento-organic Compounds AN SSSR (Institut
elementoorganicheskikh soyedineniy AN SSSR)

TITLE: Colored polyarylates of 4,4'-dihydroxyazobenzene.¹¹⁴¹⁵ 80th report in the series
On Heteropolyesters

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2052-2056

TOPIC TAGS: polymer, polyaryl plastic, polycondensation, thermomechanical property

ABSTRACT: Polyarylates of 4,4'-dihydroxyazobenzene (I) with phenolphthalein (II),
dian (III), isophthalic (IV), and terephthalic (V) acids were synthesized and their
physical properties were investigated. Study of the effects of the dibasic phenol
upon the structure of the product and of the azo group upon its color was of partic-
ular interest. Experimental work was performed using methods described by the
authors in earlier publications (Vysokomolek. soyed., 6, 2174, 1964; 7, 322, 1965;
7, 1543, 1965). It was found that polyarylates of I with IV and V do not melt but
decompose above 400°C. Thermomechanical curves (see Fig. 1) indicate that while
polymers derived from I reacted with IV and V possess low deformation and high rigid-
ity, but that introduction of II and III increases the former and lowers the latter
property. The solubility of homopolyarylates of I in organic solvents may be

UDC: 678.674

Card 1/3

L 13519-66

ACC NR: AP6001860

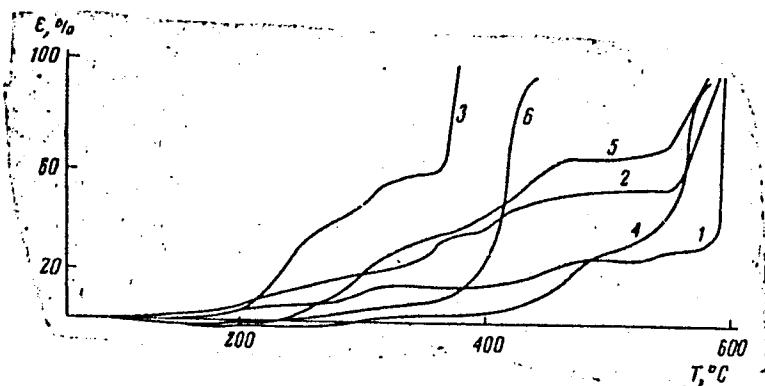


Fig. 1. Thermomechanical curves of polyarylates from I with dian (III), phenolphthalein (II), terephthalic (V), and isophthalic (IV) acids.

- 1 - I:V=1:1 (interphase polycondensation);
- 2 - I:III:V = 0.5:0.5:1 (interphase polycondensation);
- 3 - I:III:V = 0.2:0.8:1 (interphase polycondensation);
- 4 - I:V = 1:1 (equilibrium polycondensation);
- 5 - I:II:V = 0.5:0.5:1 (equilibrium polycondensation);
- 6 - I:IV = 1:1 (equilibrium polycondensation).

Card 2/3

L 13519-66

ACC NR: AP6001860

increased by substituting a portion of I by II or III. Such solutions can be used for preparing strong, transparent yellow films which, when heated for several hours at 250°C, still maintain up to 50% of their original tensile strength. Spectra of the products in the visible and UV regions are reported. Orig. art. has: 3 figures, and 4 tables.

SUB CODE: 07/ SUBM DATE: 23Dec64/ ORIG REF: 003/ OTH REF: 003

Card 3/3 DR

KORSHAK, V.V.; VINOGRADOVA, S.V., doktor khim.nauk

Recent developments in the study of polyarylates. Vest,AN SSSR 35
no.6:72-77 Je '65. (MIRA 18:8)

1. Institut elementoorganicheskikh sovedineniy AN SSSR. 2. Chlen-korrespondent AN SSSR (for Korshak).

KORSHAK, V.V.; VINOGRADOVA, S.V.; SILING, S.A.

Heat resistant films on a base of thermosetting polyacrylates. Khim.
volok. no.3:16-19 '65. (MIRA 18:7)

1. Institut elementoorganicheskikh soyedineniy AN SSSR, Moskva (for
Korshak, Vinogradova). 2. Vsesoyuznyy nauchno-issledovatel'skiy in-
stitut iskusstvennogo volokna (for Siling).

KORSHAK, V.V.; VINOGRADOVA, S.V.; PANKRATOV, V.A.

Heterochain polyesters. Report 56: Fluorine-containing polyarylates.
Izv. AN SSSR. Ser. khim. no.9:1649-1654 '65. (MIRA 18:9)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Khimiko-
tehnologicheskiy institut im. D.I. Mendeleyeva.

L 01046-66 EWG(j)/EWT(m)/EPF(c)/EWP(j)/T/EWA(h)/EWA(l) WW/RM

ACCESSION NR: AP5019781

UR/0062/65/000/007/1286/1288

541.6+539.238

AUTHOR: Pankratov, V. A.; Korshak, V. V.; Vinogradova, S. V.

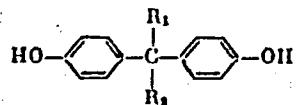
48
36
B1

TITLE: Synthesis of polyaryl esters of 2',7'-dihydroxyspiro[fluorene-9,9'-xanthene]

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 7, 1965, 1286-1288

TOPIC TAGS: polyaryl ester, heat resistant polymer, solubility

ABSTRACT: Homo- and co-polymeric polyaryl esters based on 2',7'-dihydroxyspiro[fluorene-9,9'-xanthene] have been prepared in an attempt to produce polyaryl esters having both heat resistance and good solubility in common organic solvents, and hence, better processability. The other reactants were terephthalic and/or isophthalic chloride and various bisphenols of the type

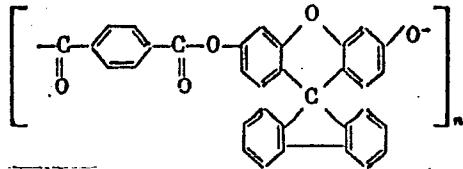


Card 1/2

L 01046-66

ACCESSION NR: AP5019781

(where R₁ and R₂ are aliphatic, perfluorinated, and aromatic substituents) as well as hydroquinone and resorcinol. The polymers and copolymers had high softening points (320–370°C) and good solubility in tricresol, tetrahydrofuran, and chlorinated hydrocarbons. The presence in the polymer repeat unit



of stable aromatic systems increases their thermal stability and suggests that they will also exhibit high radiation resistance. Orig. art. has: 1 table and 3 formulas.

[SM]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute of Organoelemental Compounds, Academy of Sciences, SSSR)

SUBMITTED: 30Oct64

ENCL: 00

SUB CODE: OC/GC

NO REF Sov: 005

OTHER: 002

ATD PRESS: 4068

Card 2/2

LP

44,55

L 2324-66 EWT(m)/EPF(c)/EWP(j)/T/ETC(s) WW/RM

ACCESSION NR: AP5022222

UR/0191/65/000/009/0016/0019
678.673,01:536.495:537.311

AUTHOR: Vinogradova, S. V.; Korshak, V. V.; Fridman, Ye. I.; Andreyeva, M. A.; Baraboshkina, L. N.

TITLE: Heat-resistant electroinsulating polyarylate plastic material

SOURCE: Plasticheskiye massy, no. 9, 1965, 16-19

TOPIC TAGS: plasticizer, heat resistant plastic, heat resistant material, polyaryl plastic, terephthalic acid, electric insulator, plastic, heat resistance, polyarylate, phenolphthalein, bisphenol A, isophthalic acid, softening point

ABSTRACT: The possibility of preparing heat-resistant plastics suitable for electric insulators and capable of being compression molded was studied by preparing neat and mixed compositions from phenolphthalein isophthalate or terephthalate based polyarylates (i.e., aromatic polyesters). It was also attempted to prepare polymers which had to be kept at their melting temperature during compression molding for a minimum time. Thus, powdered poly(phenolphthalein isophthalate) could be compression molded at 270—300°C into semitransparent light-brown samples of plastic designated as F-1, while the poly(phenolphthalein terephthalate), designated as plastic F-2, cracked

Card 1/2

L 2324-66

ACCESSION NR: AP5022222

and disintegrated after being taken out of the molds. The addition of plasticizers, "Sovol" [biphenol dichloride], a polysiloxane and some other polyarylates based on either bisphenol A or phenolphthalein sebacate, made it possible to prepare compression molded samples from F-2 with softening points from 255 to 340C. The addition of Sovol in varying amounts or the same polysiloxane to F-1 produced plastics with softening points between 250 and 285C. Even the sample with 10% Sovol still had a softening point of 230C, which was considered to be sufficiently high, combined with good workability of the material. The introduction of fillers (up to 40% by weight of the composition) was also studied for the purpose of reducing cracking of the plastic and to save polymer materials. Good results were obtained with quartz flour or talcum, while aluminum oxide or silica gel were ineffective. The filled F-2 polyarylate samples were resistant to thermal shock; they withstood repeated sharp temperature change from -60 to 250C. The polyarylate compositions obtained had high dielectric properties in a rather wide range of temperatures. Orig. art. has: 4 figures and 4 tables.

[BN]

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: MT,OC

NO REF SOV: 004

OTHER: 000

ATD PRESS: 4107

Card 2/2, Md.

L 3785-66 E/T(m)/EFF(c)/EWP(j)/T/EWA(c) RPL NW/RM

ACCESSION NR: AP5025510 UR/0062/65/000/009/1649/1654
541.6+661.723-16

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Pankratov, V. A.

TITLE: Heterochain polyesters. 56. Fluorinated polyarylates

SOURCE: AN SSSR. Izvestiya. Seriya khimicheskaya, no. 9, 1965, 1649-1654

TOPIC TAGS: polymer, fluorinated polymer, polyester, polyarylate

ABSTRACT: The purpose of this work was to prepare homo- and heteropolyarylates from 2,2-bis-(4-hydroxyphenyl)-1,1,1,3,3-hexafluoropropane, 2,2-bis-(4-hydroxyphenyl)-1,1,1-trifluoro-2-phenylethane with terephthalic, isophthalic, perfluoro-adipic, and perfluorosebacic acids, and to investigate the properties of the polymers obtained. It was found that replacement of the methyl group at the central carbon atom of the diphenols by a trifluoromethyl group lowers the softening temperature of the homo- and heteropolyarylates obtained from them. Condensation of *w,w,w*-trifluoroacetophenone with phenol yielded 2,2-bis-(4-hydroxyphenyl)-1,1,1-trifluoro-

Card 1/2

L 3785-66

ACCESSION NR: AP5025510

2-phenylethane. The characteristics of the polyarylates obtained are given in tabular form. Orig. art. has: 2 tables. [vs]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
(Institute of Heteroorganic Compounds, Academy of Sciences, SSSR); Khimiko-tehnologichesklyy institut im. D. I. Mendeleyeva (Chemical Technology Institute)

SUBMITTED: 02Jul63

ENCL: 00

SUB CODE: MT, OC, EC

NO REF SOV: 010

OTHER: 009

ATD PRESS: 4118

PC

Card 2/2

L 1868-66 EPA(s)-2/EWT(m)/EPF(c)/EWP(j)/T/ETC(m) WW/RM

ACCESSION NR: AP5024495

UR/0191/65/000/010/0001/0003

678.673.4:678.029.44

6 41

37

AUTHOR: Vinogradova, S. V.; Andreyeva, M. A.; Davydova, V. F.; Korshak, V. V.

TITLE: Study of the feasibility of curing¹⁵ and converting thermosetting polyaryl esters into end products

SOURCE: Plasticheskiye massy, no. 10, 1965, 1-3

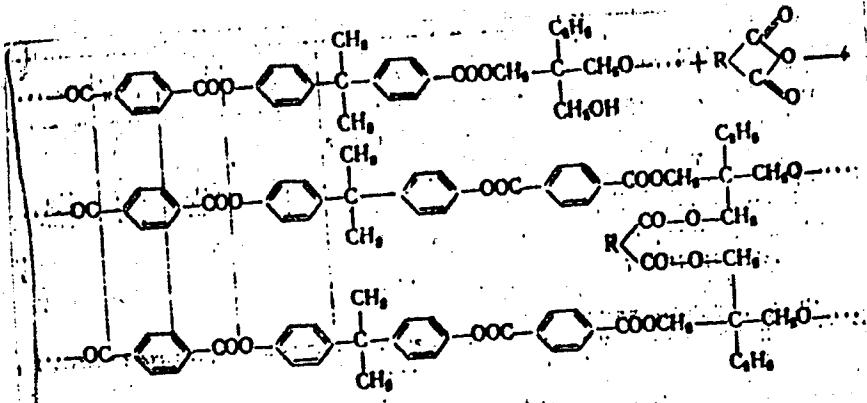
TOPIC TAGS: polyaryl ester, heat resistant plastic, polyaryl plastic

ABSTRACT: A study has shown that unfilled or quartz-filled cross-linked D-5 polyaryl ester can be processed into end products by molding. D-5, prepared from terephthaloyl chloride, bisphenol A, and 1,1,1-trimethylolpropane (1/0.5/0.5 molar ratio), is partly cross-linked (38% insoluble in chloroform) at the outset. Study of further cross-linking by various curing agents revealed that maleic and endic (cis-3,6-endomethylene-1,2,3,6-tetrahydrophthalic) anhydrides or tetrabutoxytitanium give the best results. Cross-linking occurs as follows:

Card 1/4

L 1868-66

ACCESSION NR: AP5024495



Study of D-5 molding showed the expediency of using a cross-linked polymer softening at 200–210°C and 60–70% insoluble. Such a polymer is rapidly molded (at 110–160°C) into solid products. Fig. 1 of the Enclosure shows the thermomechanical properties of D-5 and, for comparison, of D-2 polyaryl ester (from terephthalic acid and bis-phenol A). As Fig. 1 indicates, cross-linking considerably improves heat resistance.

Card 2/4

L 1868-66
ACCESSION NR: AP5024495

Cross-linked D-5 withstands temperature cycling from -60 to 250C and exhibits good dielectric properties. Orig. art. has: 1 table and 4 figures. [SM]

ASSOCIATION: none

SUBMITTED: 00

ENCL: 01

SUB CODE: MT

NO REF SOV: 002

OTHER: 000

ATD PRESS: 412

Card 3/4

L 1868-66
ACCESSION NR: AP5024495

ENCLOSURE: 01

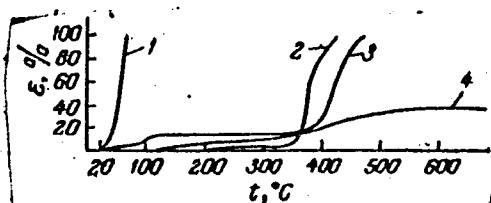


Fig. 1. Thermomechanical curves

1 - Initial D-5 polyaryl ester;
2 - D-2 polyaryl ester; 3 - D-5
cross-linked with 15% maleic an-
hydride; 4 - D-5 cross-linked with
15% tetrabutoxytitanium.

Card 4/4

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

L 1898-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5021600

UR/0286/65/000/013/0070/0070
678.673

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Salazkin, S. N.

TITLE: Preparative method for polyaryl esters. Class 39, No. 172492

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 13, 1965, 70

TOPIC TAGS: polymerization, heat resistant polymer, polyaryl ester

ABSTRACT: An Author Certificate has been issued for a preparative method for polyaryl esters based on bisphenols and 4,4'-diphenylphthalide dicarboxylic acid chloride [sic].

[SM]

ASSOCIATION: none

SUBMITTED: 08Jun64

ENCL: 00

SUB CODE: MT, GC

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4188

Melb
Card 1/1

L 1894-66 EWT(m)/EPF(c)/EWP(j)/T RPL WW/RM
ACCESSION NR: AP5021551

UR/0286/65/000/013/0017/0017
678.744.45.002.2
547.566.1
547.391.1

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Korchevey, M. G.

TITLE: Preparative method for polymers and copolymers of an acrylic compound.
Class 12, No. 172312

SOURCE: Byulleten' izobreteni i tovarnykh znakov, no. 13, 1965, 17

TOPIC TAGS: polymer, polymerization, allylphenol methacrylate, heat resistant polymer

ABSTRACT: An Author Certificate has been issued for a preparative method for acrylic polymers and copolymers of increased heat resistance. The method involves bulk polymerization of 2-allylphenol methacrylate at elevated temperature in the presence of free radical initiators [unspecified]. [SM]

ASSOCIATION: none

Card 1/2

L 1894-66

ACCESSION NR: AP5021551

SUBMITTED: 26Feb64

ENCL: 00

SUB CODE: MT, GC

NO REF SOV: 000

OTHER: 000

ATD PRESS: 4088

mle
Card 2/2

L 1809-66 ENT(m)/EPF(c)/ENP(v)/ENP(j)/T RPL RM/WW

ACCESSION NR: AP5025026

UR/0286/65/000/016/0082/0082

678.673.7-13

677 521

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Korchevy, M.; Kul'chitskiy, V. I.

TITLE: Preparative method for copolymers of unsaturated allyl-substituted polyaryl esters. Class 39, No. 173936

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 16, 1965, 82

TOPIC TAGS: polyaryl ester, heat resistant polymer, cross linking

ABSTRACT: An Author Certificate has been issued for a preparative method for copolymers of unsaturated allyl-substituted polyaryl esters. The method involves copolymerization of the appropriate polyaryl esters with cross-linking agents at elevated temperature in the presence of free radical initiators. To improve the heat and chemical resistance of the copolymers, the cross-linking agents used are tetrafunctional acrylic monomers, e.g., allyl methacrylate, 2-allylphenol methacrylate, or 4, 4'-isopropylidenediphenol methacrylate. The copolymers so prepared are suitable as binders in glass-reinforced plastics. [SM]

Card 1/2

L 1809-66

ACCESSION NR: AP5025026

ASSOCIATION: none

SUBMITTED: 23Nov64

ENCL: 00

SUB CODE: OC, MT

NO REF Sov: 000

OTHER: 000

ATD PRESS: 411

Card 2/2 C(1)

KORSHAK, V.V.; VIKTOROV, V.N., et al. *Vysokomol. soed.*, 1971, v. 13, p. 101.

Thermal cross-linking of unsaturated polyacrylates containing allyl side groups. *Vysokomol. soed.* 7 no.3:457-461 № 165.

(MIRA 18:7)

1. Institut element-organicheskikh soedineniy AN SSSR.

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 8, 1965, 1406-1409

TOPIC TAGS: polymer, polyacrylate, polymer exchange, polyamide, copolymer, block copolymer

ABSTRACT: The properties of polyacrylate polyamides based on poly-

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

4 0200-02
ACCESSION NR: AP8626976

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

L 1968-66 EWT(m)/EPF(c)/T/EWP(j) NW/RM

ACCESSION NR: AP5022599

UR/0190/65/007/009/1543/1548
678.674

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Antonova-Antipova, I. P.

TITLE: Colored polyaryl esters based on certain dihydroxyanthraquinones

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1543-1548

TOPIC TAGS: polyaryl ester, polymerization color, heat resistant polymer

ABSTRACT: To eliminate the dyeing step and to improve colorfastness, intrinsically colored polyaryl esters have been synthesized from dihydroxyanthraquinones, viz., alizarin, quinizarin, and quinizarin blue. Such starting materials were also of interest from the standpoint of the effect of repeat-unit structure on polymer properties, and because such polymers could be modified by treatment with metal salts. Homo- and co-polymeric polyaryl esters were prepared from the dihydroxyanthraquinones and terephthalic and isophthalic acids, and phenolphthalein by polycondensation in high boiling solvents. It was found that homo- and co-polymeric polyaryl esters from quinizarin and terephthalic or isophthalic acids, and from alizarin blue and terephthalic acid have high softening points, e.g., 475-500°C for the polymer from quinizarin and terephthalic acid. Copolymeric

Card 1/2

L 1968-66

ACCESSION NR: AP5022599

polyaryl esters from the dihydroxyanthraquinones and phenolphthalein had good solubility in organic solvents and could be readily cast from solution to form films.⁴ Such films were colored, strong (800—1200 kg/cm²) and elastic (10—15%). Film color could be modified by adding the appropriate metal salt to the polymer solution. Orig. art. has: 3 formulas, 3 figures, and 2 tables. [SM]

ASSOCIATION: Institut elementoorganicheskikh soyedinenii AN SSSR (Institute of Heteroorganic Compounds, AN SSSR)^{44.5}

SUBMITTED: 13Oct64

ENCL: 00

SUB CODE: MT, GC

NO REF SOV: 006

OTHEF: 002

ATD PRESS: 40%

Card 2/2 DP

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 9, 1965, 1633-1636

plasticization effect of the substituents. This reaction was carried out by interfacial and low- and high-temperature solution polycondensation. Isophthaloyl and terephthaloyl chlorides and hydroquinone, resorcinol, and phenolphthalein were used with them to prepare homo- and copolymer polyarylene esters. It was found that the comparison

Card

A INFORMATION NO. 148100017

editors stated as follows: "we were not fully informed about the situation in
the area, but we were told that there was no serious problem."

RECORDED IN THE INFORMATION CENTER

SUBMISSION #: 1480-004

EX-1

FILE DATE: APR. 30

NO. REF. NO.: 1480

CHINE

ATTY: DPPC - 1480-004

Card 2/2

L 3938-66 EWT(m)/EPF(c)/EWP(j)/T RM

ACCESSION NR: AP5025956

UR/0190/65/007/010/1689/1692
541.64+678.674

AUTHOR: Korshak, V. V.; Vinogradova, S. V.; Palkratov, V. A.

44,55

44,55

30

13

TITLE: Synthesis and investigation of polyarylates from 4,4'-biphenyldicarboxylic acid and diphenols with various substituents at the central carbon atom

15 44,55

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 10, 1965, 1689-1692

TOPIC TAGS: polyester, plastic, polyarylate

ABSTRACT: In the course of continuing investigations of polyesters, a series of polyarylates were prepared from bis-(4-hydroxyphenyl)methane, 2,2-bis-(4-hydroxyphenyl)propane, 2,2-bis-(4-hydroxyphenyl)hexafluoropropane, bis-(4-hydroxyphenyl)-phenylmethane, bis-(4-hydroxyphenyl)methylphenylmethane, bis-(4-hydroxyphenyl)trifluoromethylphenylmethane, bis-(4-hydroxyphenyl)diphenylmethane, 9,9-bis-(4-hydroxyphenyl)fluorene, and 4,4'-biphenyldicarboxylic acid. It was found that the physical properties of the polyarylates obtained depend to a large extent on the nature of the substituent at the central carbon atom. The physical constants and the mechanical characteristics of the polyarylates are given in tabular form. Orig. art. has: 2 tables.

[VS]

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Heteroorganic Compounds, AN SSSR)

Card 1/2

L 3938-66

ACCESSION NR: AP5025956

SUBMITTED: 02Nov64

ENCL: 00

SUB CODE: MT,OC,GC

NO REF SOV: 009

OTHER: 001

ATD PRESS: 418

Card 2/2

DP

L 3936-66 EWT(m)/EPF(c)/EWP(j)/T/ETC(m) RPL KW/RM
ACCESSION NR: AP5025968

UR/0190/65/007/010/1313/1817
678.01:54+678.67

A.U.S. H. S. H. S. 15.4.1.55
AUTHOR: Korshak, V. V.; Manucharova, I. F.; Vinogradova, S. V.; Pankratov, V. A.

TITLE: Investigation of the thermal stability of a series of polyarylates by differential thermal analysis

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 10, 1965, 1813-1817

TOPIC TAGS: polyarylate, plastic, polymer, thermal stability

ABSTRACT: Polyarylates were prepared from diphenols and terephthalic acid and subjected to differential thermal analysis utilizing thermogravimetric methods. It was found that the nature of the substituent at the central carbon of the diphenol (of the di-p-hydroxyphenylmethane type) exerts an appreciable influence on the thermal stability of the polyarylate. Thus, e.g., replacement of methyl groups at the central carbon atom by trifluoromethyl groups improves the stability of the polyarylate. The temperatures of incipient decomposition of the polyarylates investigated ranged from 375 to 465°C. The most thermally stable polyarylate was obtained from 9,9-bis-(4-hydroxyphenyl)fluorene and terephthalic acid. Orig. art. has: 2 tables and 5 figures. [VS]

Card 1/2

L 3936-66

ACCESSION NR: AP5025968

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Heteroorganic Compounds, AN SSSR); Institut obshchey i neorganicheskoy khimii AN SSSR (Institute of General and Inorganic Chemistry, AN SSSR)

SUBMITTED: 26Nov64

ENCL: 00

44,55
6
SUB CODE: MT, OC, GC, TD

NO REF SOV: 011

OTHER: 000

ATD PRESS: 4-118

Card 2/2 DP

L 3398-66 EWT(m)/EPF(c)/EWP(j) RM

ACCESSION NR: AP5024214

UR/0020/65/164/003/0563/0566

AUTHORS: Vinogradova, S. V.; Korshak, V. V. (Corresponding member AN SSSR);
Pankratov, V. A.; Tur, D. R.

TITLE: Investigation of the kinetics of polycondensation of bisphenols with the
acid chloride of terephthalic acid

SOURCE: AN SSSR. Doklady, v. 164, no. 3, 1965, 563-566

TOPIC TAGS: polycondensation, terephthalic acid, bisphenol, organic compound, polymer

ABSTRACT: The kinetics of the polycondensation of bis-(4-oxyphenyl)-methane, 2,2-bis-(4-oxyphenyl) propane, 2,2-bis-(4-oxyphenyl)-hexafluoropropene, bis-(4-oxyphenyl)-phenylmethane, 2,2-bis-(4-oxyphenyl)-2-phenylethane, bis-(4-oxyphenyl) trifluoromethylphenylmethane, and bis-(4-oxyphenyl)-diphenylmethane with the acid chloride of terephthalic acid in the temperature region from 160-200°C was investigated. The purpose of the investigation was the determination of the influence of the nature of substituents at the central carbon atom of bisphenols on the reactivity of the latter. The reactions were carried out in ditolyl methane in a

Card 1/3

I, 3398-66

ACCESSION NR: AP5024214

3

current of dry oxygen-free nitrogen. The experimental results are shown graphically (see Fig. 1 on the Enclosure). Energies of activation and frequency factors derived from Arrhenius' plots are tabulated. A reaction mechanism is proposed. It is concluded that the reactions studied belong to the slow class of bimolecular reactions. Orig. art. has: 2 tables, 3 graphs, and 2 formulas.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy, Akademii nauk SSSR
(Institute for Heteroorganic Compounds, Academy of Sciences, SSSR) 44, 55

SUBMITTED: 22Mar65

ENCL: 01

SUB CODE: OC, GC

NO REF SOV: 002

OTHER: 000

Card 2/3

L 3398-66

ACCESSION NR: AP5024214

ENCLOSURE: 01

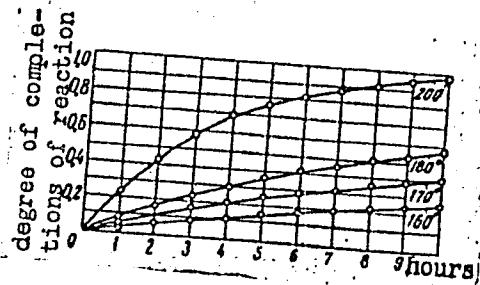


Fig. 1. The dependence of degree of completion of reaction on the duration of polycondensation of the acid chloride of terephthalic acid with bis-(4-oxyphenyl)diphenylmethane

Card 3/3 Revd

KORSHAK, V.V.; VINOGRADOVA, S.V.; SILING, S.A.

Synthesis and analysis of cross-linked polyarylates. Khim.
volok. no.1:35-38 '65. (MIRA 18:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR (for
Korshak, Vinogradova). 2. VNIIIV (for Siling).

KURCHEVY, M.G.; KALINK, V.V.; VINOGRADOVA, S.Y.

Block polymerization of some allyl and acryl monomers. Vysokom. soed.
7 no.1:150-155 Ja '65. (MIRA 18:5)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

KORCHAK, V.V.; VINGRADOV, S.V.; ANTONOVA-ANTIPova, I.P.

Colored polyarylates based on 3,3'-azobenzenedicarboxylic acid. Vysokom. soed. 7 no.2:322-327 ? '65.
(MIRA 18:3)

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

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DATE 12-10-2001 BY SP 144

ALL INFORMATION CONTAINED
HEREIN IS UNCLASSIFIED

Card 12

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

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A = 1.44 \pm 0.05

NC REG. NO. 100-1003

ANSWER The answer is 1000. The first two digits of the number are 10, so the number is 1000.

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

KOKSHAK, V.V.; VINOGRADOVA, S.V.; SILING, S.A.

Structuration of polyarylates containing free hydroxyl groups
in the chain. Vysokom. soed. 7 no.4:701-706 Ap '65.
(MIRA 18:6)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

ABSTRACT:

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

ACCESSION NO. 200109010006

polymer properties. The advantages of using concentrated solutions, in particular, the better mechanical properties of polymers so prepared, are often claimed. However, it is not clear whether the increased strength is due to increased density.

Card 2

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

APPROVAL NUMBER: 45-1212

RECORDED BY: [REDACTED] DATE: [REDACTED]

SEARCHED: [REDACTED] INDEXED: [REDACTED] SERIALIZED: [REDACTED]

FILED: [REDACTED] APPROVING OFFICER: [REDACTED]

SEARCHED: [REDACTED] INDEXED: [REDACTED] SERIALIZED: [REDACTED]

FILED: [REDACTED] APPROVING OFFICER: [REDACTED]

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

L 59476-65

ACCESSION NR: A7015031

resorcinol, Bisphenol A, and furanethiol are shown in tensile strength of

Polyaryl esters can be processed into end products by conventional methods utilizing the following processes: casting, extrusion, injection molding, and film.

Korshak and Vinogradova predict widespread acceptance of polyaryl esters. Other applications are predicted for the material if high resistance, good dielectric properties, and high strength are desired.

Fig. 1 and 2 are sample

Card 4/5

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

L 747-3
ACCESSION NR: AFS 015831

ASSOCIATION: Institut Elementos de la Universidad Autonoma de Mexico

And S'5

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

L 52138-65 SHF(c)/SHF(j)/SHF(m)/T Pe-1/Pr-1 RM

ACCESSION NR: AP5015289

UR/02/16/65/000/001/0067

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Salazkin, S. N.; Vygodskiy, Ya. S.

TITLE: A method for obtaining polyarylates. / Class 39, No. 170661

SOURCE: Byullaten' izobreteniy i tovarknykh znakov, no. 9, 1965, 67

TOPIC TAGS: polyarylate, diphenyl chloride, dicarboxylic acid, phenol, polymer

ABSTRACT: This Author Certificate presents a method for obtaining polyarylates by the condensation of chloroanhydrides of dicarboxylic acids with two-atom phenols in solutions of a high boiling point solvent. To increase the molecular weight of the obtained polymer, to lower the amount of solvent used, and to simplify the technique of separating the polymer, diphenyl chloride is used as the high boiling point solvent.

ASSOCIATION: none

SUBMITTED: 13Aug62

ENCL: 00

SUB CODE: 00

NO REF SOV: 000

OTHER: 000

Card 1/1 7/6

ACCESSION NO.: AP9015295

JK/3236/65.000/001/0068/2068

AUTHORS: Korshak, V. V.; Rafikov, S. R.; Vinogradova, S. V.; Fomina, Z. Ye.

TITLE: A method for obtaining uniform and mixed polyarylates. Class 1, No.
170075

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 9, 1965, 68

TOPIC TAGS: polyarylate, chloranhydride, phenol, dicarboxylic acid, ultraviolet light, diphenol, sulfophthalein

ABSTRACT: This Author Certificate presents a method for obtaining uniform and mixed polyarylates based on chloranhydrides of dicarboxylic acids and 2-atom phenols. To obtain polyarylates stable under the action of ultraviolet rays, diphenols containing sulfo-groups, such as *c*ulfophthalain, are used as 2-atom phenols.

ASSOCIATION: none

SUBMITTED: 08Jan64

ENCL: 00

SUB CODE: QC

NO REP Sov: 000

OTHER: 000

L 56561-65 EWT(m)/EXP(+) T PC-1 AM

010.010.002.4

AUTHOR: Vinogradova, S. V.; Korshak, V. V.; Vygodskiy, Ya. S.

TITLE: A method for producing aromatic polyamides. Class 32, No. 171552

SOURCE: Byulleten' izobreteniij i tovarnykh znakov, no. 11, 1965, 76

TOPIC INDEX: polyamide polymer, aromatic diamine, aromatic polyamide

KORSHAK, V.V.; SIDEROV, T.A.; VINOGRALOVA, S.V.; KOMAROVA, L.I.; VAIETSKY, P.M.; LEBEDEVA, A.S.

Heterochain complex polyesters. Report No.52: Determination of double bonds in unsaturated polyarylates by infrared spectroscopy. Izv. AN SSSR Ser. khim. no.2:261-268 '65.

(MIRA 18:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

PANKRATOV, V.A.; VINOGRADOVA, S.V.; FEDOROVA, R.D.

Heterochain polyesters. Report No.63: Synthesis and investigation
of the new types of polyarylates based on 2,2-bis-(4-hydroxyphenyl)-
2-phenylethane. Izv. A SSSR. Ser. khim. no.2:342-348 '65.

(MIRA 18:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Moskovskiy
khimiko-tehnologicheskiy institut im. D.I. Mendeleyeva.

vents has been achieved by cross-linking the backbones of polyarylates by a controlled incidence of cross-linking.

was modified by introducing a small number of free hydroxyls as end-groups.

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

ACCESSION NR: APPRO1252

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

I-441-102

AMERICAN VISCOSITY CO., INC.

2) esterifying the free hydroxyl groups with anhydrides or dibasic carboxylic acids.

indicated that, in general, mechanical properties improve after controlled cross-linking, and that the nature of the cross-linking agent has little effect on this improvement.

(b)(1)
ASSOCIATION Institute of Russian Scientific Research of
Heteroorganic Compounds AN SSSR
Card 74

KORSHAK, V.V.; PAVLOVA, S.A.; TROFEEVA, G.I.; VINOGRADOV, N.V.; PANIKAROV, V.A.

Influence of the steric factor on the viscometric properties and
polydispersity of polyarylates. Dokl. AN SSSR 160 no.1:119-122
Ja '65. (MIREA 18:2)

1. Institut elementoorganicheskikh soyedineniy AN SSSR. 2. Chlen-
korrespondent AN SSSR (for Korshak).

PC-4/PC-4/PC-4 RPL 100/100

of semi-crystalline polyarylates, *Journal of Polymer Science*, **19**, 1955.

ASSOCIATION: none

25 Jun 61

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SUB ALDE: XC

N HEP 07.1976

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APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

KOIGSHAK, V.V.; VINOGRADOVA, S.V.; VINOGRADOV, N.G.

Ring formation in beryllium poly-beta-ethyl diacetate solution.
Vysokomol. soed. 6 no.11 1987-1991 N 164 (MIRA 38:2)

I. Institut elementoorganicheskikh soyedineniy AN SSSR.

VINOGRADOVA, S.V.; KORSHAK, V.V.; SALAZKIN, S.N.; BEREZA, S.V.

Heterochain polyesters. Part 60: Polyarylate based on phenolphthalein
anilide. Vysokom. soed. 6 no.8:1403-1406 Ag '64.

(MIRA 17:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

VINOGRADOVA, S.V.; KORSHAK, V.V.; SALAZKIN, S.N.; BEREZA, S.V.

Heterochain polyesters. Part 41: Synthesis of polyarylates of phenol-phthalein anilide by interfacial polycondensation. Vysokom. soed. 6 no.9:1555-1558 S '64. (MIRA 17:10)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

IC

L 3476-65 EXP 10/20/01 BY 10/20/01
A. 1. 1. 1. 1. 1. 1.

AUTHRGD: Kornshak, V. I., Vysokomolekulyarnyye soyedineniya, v. 7, no. 2, 1965, 322-327

TITLE: SYNTHESIS OF POLYARYLIC ACIDS

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 2, 1965, 322-327

TOPIC TAKS: 11carboxylic acids, polyesters, azobenzenes, stereoregularity.

ABSTRACT: The synthesis of 3,3'-azobenzenedicarboxylic acid polyarylates was accomplished by the equilibrium method and also by interphase polymerization. The reaction between m-aminobenzoic acid and 3,3'-azobis(2-methylpropionitrile) in the presence of hydroquinone and resorcinol in benzene at 100°C gave a yield of 80-90% of the polyarylate. The polyarylate was soluble in benzene, chloroform, hydroquinone, and resorcinol. The 3,3'-azobenzenedicarboxylic acid was obtained with a yield of 80-90% by diazotization of m-aminobenzoic acid with subsequent decomposition of the diazo compound. The 3,3'-azobenzenedicarboxylic acid was soluble in benzene, chloroform, and hydroquinone.

Cord 1/2

L 35476-65

ACCESSION NR: AP5005602

(melting point = 83.5-84.5°C). This product, colored yellow, was used as initial material for producing synthetic polyarylates. Both homogeneous and mixed polyarylates were formed. With phenolphthalein, both were found to be readily soluble in chloroform, acetone, and benzene at room temperature. The reaction of the polyarylates with phenolphthalein was studied at 100°C and at 120°C. At 100°C, the reaction was rapid, giving about 80% conversion after 1 hour. At 120°C, the reaction was much faster, giving about 80% conversion after 15 minutes. The polyarylates formed from the polyphenols and phenolphthalein had a melting point of 100-102°C.

ASSOCIATION: none

SUBMITTED: 00

ENCL: 00

SUB CODE: 00

NO RIF 30V: 001

OTHER: 003

Card 1 of 1

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9

PROPERTY OF THE STATE

ANNUAL REPORT OF THE GOVERNOR OF THE STATE BANK OF KARNAK, FOR THE YEAR ENDING JUNE 30, 1890.

Card 2 -

APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

"APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9



APPROVED FOR RELEASE: 09/01/2001

CIA-RDP86-00513R001860010006-9"

AKUTIN, M. S.; KORSHAK, V. V.; RODIVILOVA, L. A.; VINOGRADOVA, S. V.;
BUINITSKIY, Yu. M.; VALETSKIY, P. M.; LEBEDEVA, A. S.; ~~Prinimali~~
uchastiye: BONDAREVA, Ye. A., laborant; RESHETNIKOVA, L. M.,
laborant; KOVALEVA, T. G., laborant

New data on the processing and properties of polyarylates.
Plast. massy no.11:20-26 '62. (MIRA 16:1)

(Esters) (Condensation products(Chemistry))

KORSHAK, V.V.; VINOGRADOVA, S.V.; U BAN-YUAN' [Wu Pang-yüan]

Heterochain polyesters. Report No.50: Structure of polyamidoarylates obtained by interfacial polycondensation. Izv. AN SSSR Ser. khim. no.7:1288-1292 Jl '64.

(MIRA 1)

Heterochain polyesters. Report No.51: Polyamidoarylates and polyarylates based on acid chloride of bis-(p-carboxyphenyl)-methylphosphine oxide. Izv. AN SSSR Ser. khim. no.7:1292-1295 Jl '64.

(MIRA 17:8)

1. Institut elementoorganicheskikh soyedineniy AN SSSR.

REFERENCES AND NOTES

CHARTS AND APPENDICES

— 1 —

TOPIC TAGS: heterochain polyester, polyarylate, polyethylene oxide, dihydro-

2000 feet above the ground surface. The water table was at 2000 feet above sea level.

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temperature (even with 50% to 60% of normal) - - - - -

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ACCESSION NR: AP4042878

lar weight, the larger the amount of PEO that may be incorporated to improve
the melting point or glassy softening temperature, with 29 wt. % of a high mo-

lular PEO.

ASSOCIATION Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR
Institute of Organic Compounds Academy of Sciences SSSR) Institut

of organic compounds

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OTHER 000

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KORSHAK, V.V.; VINOGRADOVA, S.V.; DAIAVA, G.Sh.; TSISKARI GRZILI,
I.B.

Study of mixed block polyarylates. Dokl. AN SSSR 156 no. 2:
(MIRA 17.7)
368-371 My '64.

1. Institut elementoorganicheskikh soedineniy AN Gruzin. 1
2. khimii imeni Melikishvili AN Gruzinskoy SSR. 2.
Chlen-korrespondent AN SSSR (for Korshak).

TEPLYAKOV, M.M.; KORSHAK, V.V.; VINOGRADOVA, S.V.

Exchange reaction between polyamide and polyarylate. Izv.AN SSSR.
Ser.khim. no.2:334-340. F '64. (MIRA 17:3)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Moskovskiy
khimiko-tehnologicheskiy institut im. D.I.Mendeleyeva.

ACCESSION NR: APL032574

8/0190/64/006/004/0729/0733

AUTHORS: Korshak, V. V.; Vinogradova, S. V.; Vinogradov, M. G.

TITLE: Studies in coordination polymers. 19. Exchange reactions in the poly-coordination process

SOURCE: Vyssokomolek. soyedin., v. 6, no. 4, 1964, 729-733

TOPIC TAGS: coordination polymer, polycoordination process, acetoacetyl diphenyloxide, beryllium acetylacetone, polycoordination exchange reaction, Huggins equation, Huggins constant, high molecular fraction, low molecular fraction

ABSTRACT: In order to study the exchange reactions it was necessary to produce polymer fractions differing considerably in molecular weight. This was achieved by fractionating a polymer synthesized from 4,4'-bis-(acetoacetyl)diphenyloxide and beryllium acetylacetone in solution, at 160°C, in vacuum, as described in an earlier paper by the authors (Vyssokomolek. soyed., 5, 1771, 1964). The fractionation of the polymer was conducted by methanol precipitation from a 1% dimethylformamide solution. Fourteen fractions were isolated, and the specific viscosities of these and of the nonfractionated polymers were determined in 0.5% dimethylform-

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ACCESSION NR: AP4032574

amide solutions. Values of 0.30-0.80 were obtained. They matched closely the 0.31-0.80 range for specific viscosities calculated by the Huggins equation. The study of the exchange reactions taking place during the polycondensation process was conducted on a mixture of high-molecular fraction of the polymer with a low-molecular fraction. The latter polymer was obtained under conditions of excess beryllium acetylacetone and contained no terminal free enolic groups. The experiment was conducted in a 25% dimethylformamide solution. The viscosity of the mixture of the two fractions was determined after heating the mixture to 100°C for periods up to 10 hours. It was found that the molecules of the polymer interacted at a rate of approximately the same order of magnitude as the rate of their growth from the issuing materials. It is concluded that the reaction of polycoordination of 4,4'-bis-(acetoacetyl)diphenyloxide and beryllium acetylacetone is a process of balanced polycondensation. Orig. art. has: 3 charts, 1 table, and 1 formula.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR (Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 28 May 63

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NO REF Sov: 002

OTHER: 001

Card 2/2

KORSHAK, V.V.; VINOGRADOVA, S.V.; LEBEDEVA, A.S., Prinimala uchastiye
RESHETNIKOVA, L.D.

Heterochain polyesters. Part 41. Vysokom. soed. 5 no.5:674-680
Mys '63. (MIRA 17:3)

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KORSHAK, V.V.; VINOGRADOVA, S.V.; PAPAVA, G.Sh.

Heterochain polyesters. Report No.53: Mixed block polyarylates
based on polyethylene oxide, diane, and terephthalic acid chloride.
Izv. AN SSSR. Ser.khim. no.1:132-141 Je '64. (MIRA 17:4)

1. Institut elementoorganicheskikh soyedineniy AN SSSR i Institut
khimii im. Melikishvili AN GruzSSR.

KORSHAK, V.V.; VINOGRADOVA, S.V.; PANKRATOV, V.A.; BASKAKOV, A.N.

Heterochain polyesters. Report No.54: Synthesis and investigation
of new types of polyarylates based on phenyl-bis(4-oxyphenyl)
methane and diphenyl-bis(4-oxyphenyl)methane. Izv.AN SSSR.
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1. Institut elementoorganicheskikh soyedineniy AN SSSR i
Moskovskiy khimiko-tehnologicheskiy institut im. D.I.Mendeleyeva.

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KORSHAK, V.V.; VINOGRADOVA, S.V.; VINOGRADOV, M.G.

New method for the production of macrocyclic compounds from linear polymers. Dokl. AN SSSR 155 no.6:1354-1356 Ap '64.

(MIRA 17:4)

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KORSHAK, Vasiliy Vladimirovich; VINOGRADOVA, Svetlana Vasil'yevna;
RAFIKOV, S.R., doktor khim. nauk, ctv. red.; LOSKUTOVA,
I.P., red.

[Polyaryalates] Poliarilaty. Moskva, Izd-vo "Nauka,"
1964. 67 p. (MIRA 17:6)

1. Deystvitel'nyy chlen AN Kaz.SSR (for Rafikov).

VINOGRADOV, M.G.; VINOGRADOVA, S.V.; DAVIDOVICH, Yu.A.; KORSHAK, V.V.

Coordination polymers. Report No.19: Properties of an inner-complex beryllium-containing polymer based on 4,4'-bis (acetoacetyl) diphenyl oxide. Izv. AN SSSR. Ser. khim. no.11: 2023-2027 N '63. (MIRA 17:1)

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